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Version Updates

01.06 - Baseline new version

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ocal Contact Information

5th Anniversar

Prepared by:

U.S. Army Center for Health Promotion and Preventive Medicine

(800)222-9698/ DSN 584-4375/ (410)436-4375 http://usachpom.apgea.army.mil

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AGENDA

- Purpose
- Background
- Review of Guide to Staying Health
- Preparation for Deployment
- Deployment
- Post Deployment
- Summary
- Conclusion



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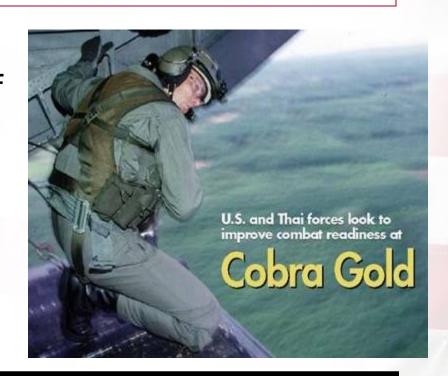
PURPOSE

Inform Personnel Deploying to Exercise Cobra Gold 2006 of the Potential Health Hazards and the Individual Countermeasures Necessary to Assure Personal Safety and ealth

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BACKGROUND

- US Forces are deploying in support of Cobra Gold 2006
- Environmental, safety, and occupational health hazards are a potential medical threat to deployed



Historical accounts of wars, battles, and military training consistently show that the greatest loss of forces was not caused by combat wounds – rather the majority of losses were the result of disease and non-battle injuries (DNBI).

BACKGROUND

The Armed Forces of Thailand, Singapore and the United States will conduct Exercise Cobra Gold in Thailand. Cobra Gold is a regularly-scheduled joint/combined exercise and is designed to ensure regional peace and strengthen the ability of the Royal Thai Armed Forces to defend Thailand or respond to regional contingencies.

THAILAND

Industrial Growth

Environmental Challenges



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GUIDE TO STAYING HEALTHY GTA 08-05-062

- Unfold YOUR Thailand: Deployment Health Guide
- Personal Protective Measures (PPM)
 - Individual Countermeasures
- Reference Guide for this Briefing

This guide is for use by all active/reserve component military, civilian, retiree, and contractor personnel. Anyone who trains for, or participates in any type of military operation should keep and refer to this guide.

PREPARING TO DEPLOY

- Medical, Dental & Vision Screening (Soldier Readiness Processing)
- Prepare clothing and gear and personal hygiene items
- Complete Pre-deployment Health Assessment (DD Form 2795)
- Immunizations and chemoprophylaxis
 - Begin malaria chemoprophylaxis when directed by medical authority

During medical screening, discuss prescribed medications with the examiner; obtain at least a 90-day supply of medications

PREPARING TO DEPLOY

ADDITIONAL PACKING ITEMS:

- Cotton underwear (10 changes)
- Birth control supplies
- Personal hygiene products
- Anti-fungal cream/powder & shower shoes
- DEET insect repellent, sunscreen, eye

If you need rhed tations of hygiene items which may not be available through normal supply systems, obtain a sixmonth supply, or enough for the duration of the operation

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PREPARING TO DEPLOY FEMALE CONSIDERATIONS

- Birth control pills
- Feminine hygiene products (nondeodorant tampons, sanitary napkins, panty liners; menstrual cramp reliever)
- Yeast infection medication (two courses of vaginal treatment)
- Portable Urinary Device
 - For use by female personnel to reduce time needed to urinate and resolve privacy issues when latrines are not available (convoys, field operations)

If using birth control pills, continue as prescribed to regulate menstrual cycles and avoid problems resulting from inconsistent use

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DEPLOYMENT HEALTH CARE

- Know where to seek health care when deployed
- May or may not be through same channels as your home station
- Maintain your health and seek care whenever an illness or injury occurs

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PREVENTIVE MEDICINE COUNTERMEASURES

- Medical Tests All Personnel
 - PPD Purified Protein Derivative
 (TST Tuberculin Skin Test)
 - Within 12 months prior to deployment
 - AND At time of redeployment
 - AND Again between 3-6 months after redeployment
 - HIV Human Immunodeficiency Virus
 - Required every 2 years. Serum collection before deployment will be tested regardless of date of last test.
 - G6PD Glucose-6-Phosphate Dehydrogenase
 - Prior to taking Primaquine (anti-malarial drugs are contra-indicated for G6PD deficient individuals)



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IMMUNIZATION REQUIREMENTS

- All Personnel
 - Hepatitis A
 - Typhoid
 - Tetanus-diphtheria
 - Yellow fever
 - Meningococcal
 - Influenza (seasonal)
 - Measles, Mumps,Rubella (MMR)

- Selected Personnel
 - Hepatitis B (medics,
 MPs, firefighters,
 combat lifesavers)
 - Rabies (occupational risk of exposure)
 - Pneumococcal (asplenic personnel)
 - Anthrax (as directed from higher)
 - Smallpox (as directed from higher)

Palia

Confirm requirements with medical authority or OPORD

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ANTI-MALARIAL MEDICATION

- Anti-Malaria Medication (as directed)
 - malaria prophylaxis for deployments is guided by the G1 in its publication of the personnel policy guidance (PPG), Chapter 7, not by the CDC
 - Take anti-malaria medication as directed by your health care provider
 - Malaria kills at least 1 million people each year worldwide (World Health Organization)

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FIELD SANITATION TEAM

- Field Sanitation Teams (FST) train unit personnel in Preventive Medicine Measures (PMM) and advise the commander and unit leaders on implementation of unit-level PMM.
- Know who the members of your Field Sanitation
 Team are PRIOR to deployment
- The FST can assist in preventing medical threats to your health
- Deploy with all FST equipment



Failure to apply PMM increases the risk of mission failure

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PERSONAL PROTECTIVE MEASURES

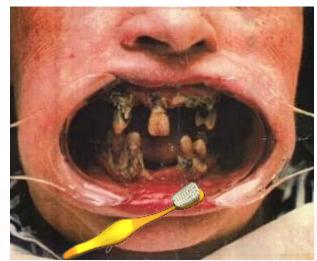
- Wash hands frequently
- Do not rub eyes or inside of nose with bare finger(s)
- Bathe/shower regularly (field expedients will do); use unscented products
- Wear shower shoes to prevent athlete's foot
- Dry thoroughly after showering
- Sleep head-to-toe if billeted in common areas
- Wear clean, dry uniforms; change socks daily and uniform at least weekly
- Do not wear nylon or silk undergarments; cotton undergarments are more absorbent and allow the skin to dry
- Seek prompt medical care if problem exists

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ORAL HEALTH

- Deploy with:
 - Toothbrush
 - Dental Floss
 - Fluoride Toothpaste
- Brush twice-daily
 - Daily in difficult tactical environments
- Floss daily
- Seek medical attention at the onset of any dental problems



SPIRITUAL HEALTH

- Maintain personal prayer/meditation
- Obtain and read wholesome religious/spiritual literature
- Attend religious/spiritual group discussions/studies
- Process anger, fear, anxiety
 & guilt through personal & group spiritual/religious activities
- Keep in touch with spiritual advisors/chaplains

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NUTRITION

 Drink fluids regularly (hourly fluid intake should not exceed 1.5 quarts, daily fluid intake should not exceed 12 quarts)

Maintain weight; do not avoid food or attempt weight loss during a

deployment

 Work in cold weather can increase energy needs by 10-25%

 Operations in high-altitude areas can increase energy needs by 50% or more

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SMOKING

- March August 2003: 19 cases of severe pneumonia in service members deployed to Southwest Asia
 - 16 smokers, 8 began smoking during the deployment
 - Two pneumonia deaths
- January 2004: 2 new severe cases of pneumonia
 - Both began smoking during this deployment

If you don't smoke, don't start during a deployment.
If you do smoke, quit.

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STRESS

- Operational stressors
- Different types and intensities
- Recognize the symptoms of depression
- Seek or encourage help
- Take steps to reduce operational

Stress can be intensified for personnel who are exposed to or observe human suffering and/or death

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IMPROVE RESISTANCE TO STRESS

- Fear and physical signs or symptoms of stress are normal reactions before and during combat or other dangerous/life-threatening situations
- Talk about what is happening with your buddies
- Learn ways to relax quickly
- Quickly integrate new replacements
- If you must join a new group, be active in establishing friendships
- Give each other moral support
- Care for your buddies and work toget



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HEARING CONSERVATION

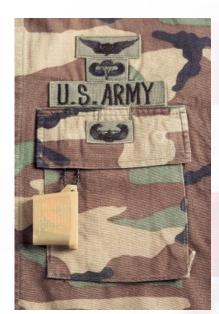
 Loud noise causes <u>permanent</u> hearing loss

COUNTERMEASURES

Have your hearing protection with you at all times and us

 Be sure your ear plugs, noise muffs or helmets fit properly and are in good condition

• Avoid noise or limit time around noise to only critical tasks NSN 6515-



Authorized wear

IAW AR 670-1

If you have to raise your voice to be understood, it is too noisy.

Combat Arms

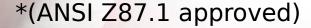
Put on hearing protection.

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VISION CONSERVATION

- Preventive Measures and Eye Protection
 - Contact lens use is prohibited for use in environments where exposure to smoke, toxic chemical vapors, sand, or dust occurs
 - If required, maintain 2 pair of glasses and 1 protective mask insert
 - Use eye protection when in any potentially eye hazardous environment
 - Safety goggles or spectacles with side shields*

mical splash goggles*

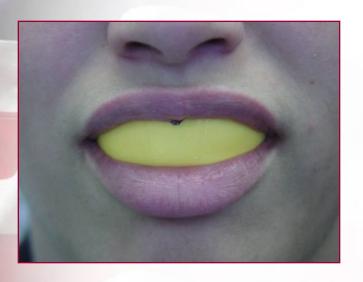


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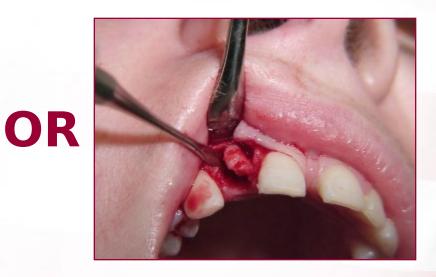
Vision Ready is Mission Ready!

MOUTH GUARDS

Use This



Lose These



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Physical Environment

Topography

- Terrain:central plain; Korat
 Plateau in the east; mountains
 elsewhere
- Elevation extremes:
 lowest point: Gulf of Thailand 0
 ft highest point: Doi Inthanon
 8,500 ft

Climate

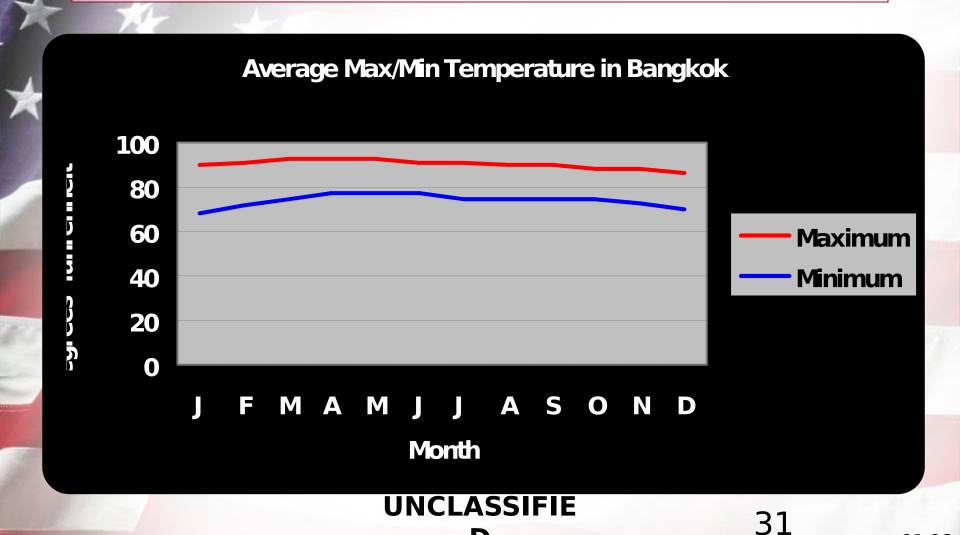
 Tropical; rainy, warm, cloudy southwest monsoon (mid-May to September); dry, cool northeast monsoon (November to mid-March); southern isthmus always hot and humid



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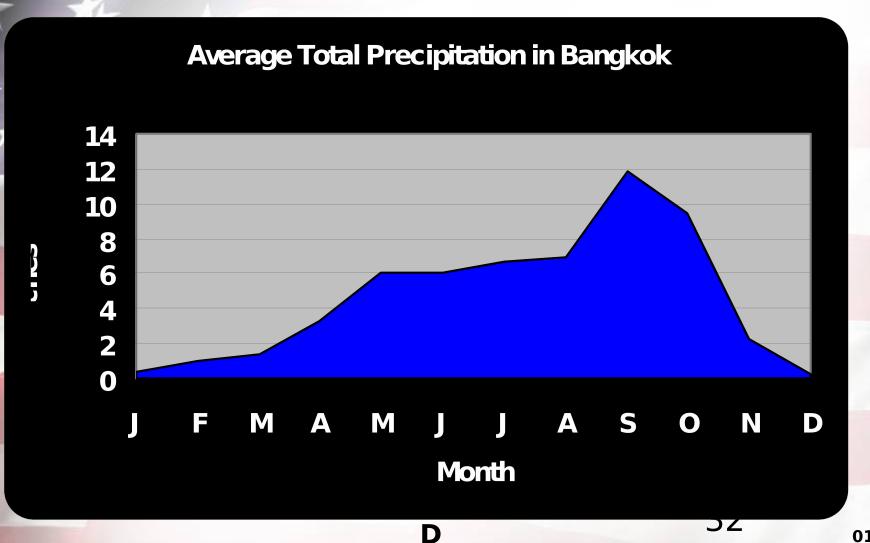
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Physical Environment



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Physical Environment



HEAT INJURY PREVENTION

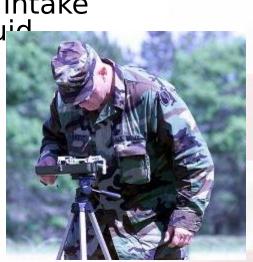
• Heat Cramps, Exhaustion, or Stroke

COUNTERMEASURES

- Drink fluids continuously (hourly fluid intake should not exceed 1.5 quarts, daily fluid intake should not exceed 12 quarts)
- Maintain acclimatization
- Protect yourself from exposure to sunlight and wind
- Maintain good physical condition
- Establish work/rest schedules
- Wear proper clothing

You should receive annual u

You should receive annual unit training on prevention of heat injury. Heat injuries are preventable!



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HEAT

H: Heat category - WBGT Index

E: Exertion level (prior 3 days)

A: Acclimatization

T: Tables - Water/Work/Rest

REMEMBER

Water requirements are not reduced by any form of training or

Units which have soldiers who do not drink because they do not have opportunities to urinate have a leadership problem.



Work/Rest and Water Consumption Table

Applies to average sized, heat-acclimated soldier wearing BDU, hot weather. (See TB MED 507 for further guidance.)

Easy Work	Moderate Work	Hard Work		
Weapon Maintenance Walking Hard Surface at 2.5 mph, < 30 lb Load Marksmanship Training Drill and Ceremony Manual of Arms	Walking Loose Sand at 2.5 mph, No Load Walking Hard Surface at 3.5 mph, < 40 lb Load Calisthenics Patrolling Individual Movement Techniques, i.e., Low Crawl or High Crawl Defensive Position Construction	 Walking Hard Surface at 3.5 mph, ≥ 40 lb Load Walking Loose Sand at 2.5 mph with Load Field Assaults 		

Heat Category	WBGT Index, F°	Easy Work		Moderate Work		Hard Work	
		Work/Rest (min)	Water Intake (qt/hr)	Work/Rest (min)	Water Intake (qt/hr)	Work/Rest (min)	Water Intake (qt/hr)
1	78° - 81.9°	NL	1/2	NL	3/4	40/20 min	3/4
2 (GREEN)	82° - 84.9°	NL	1/2	50/10 min	3/4	30/30 min	1
3 (YELLOW)	85° - 87.9°	NL	3/4	40/20 min	3/4	30/30 min	1
4 (RED)	88° - 89.9°	NL	3/4	30/30 min	3/4	20/40 min	1
5 (BLACK)	> 90°	50/10 min	1	20/40 min	1	10/50 min	1

- The work/rest times and fluid replacement volumes will sustain performance and hydration for at least 4 hrs of work in the specified heat category. Fluid needs can vary based on individual differences (± ¼ qt/hr) and exposure to full sun or full shade (± ¼ qt/hr).
- NL = no limit to work time per hr.
- Rest = minimal physical activity (sitting or standing) accomplished in shade if possible.
- CAUTION: Hourly fluid intake should not exceed 1½ qts.

Daily fluid intake should not exceed 12 qts.

- If wearing body armor, add 5°F to WBGT index in humid climates.
- If doing Easy Work and wearing NBC (MOPP 4) clothing, add 10°F to WBGT index.
- If doing Moderate or Hard Work and wearing NBC (MOPP 4) clothing, add 20°F to WBGT index.



For additional copies, contact: U.S. Army Center for Health Promotion and Preventive Medicine Health Information Operations Division at (800) 222-9698 or CHPPM - Health Information Operations@apg.amedd.army. mil.

For electronic versions, see http://chppm-www.apgea.army.mil/heat. Local reproduction is authorized.

June 2004

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SUNBURN

Prevent overexposing skin and eyes to solar radiation and wind

COUNTERMEASURES

- Use sunscreen and lip balm
- Use protective eyewear
- Limit exposure
- Cover nose and mouth to limit drying

Sunburn reduces soldier readiness and increases the likelihood of skin cancer.

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Environmental Health Risk

Greatest short-term health risks

Ingestion of food or water contaminated with fecal pathogens

High heat and humic

Greatest long term risk are associated pollution and cher contamination of food/water



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Infectious Disease Risk

HIGH RISK for infectious diseases

 Disease risk will seriously jeopardize mission effectiveness unless force health protection measures are implemented

Infectious Diseases

- Foodborne and Waterborne Diseases
 - **HIGH RISK** = Diarrhea, Hepatitis A
 - INTERMEDIATE RISK = brucellosis, typhoid/paratyphoid
- Force Health Protection (FHP) Priorities
 - Deploy appropriate PM personnel and equipment
 - Consume food, water, ice only from US-approved sources
 - Operate food preparation facilities in accordance with Army doctrine
 - Ensure proper hand washing facilities near all latrines and dining facilities and enforce 39

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Infectious Diseases Cont.

- Vector-borne Diseases
 - HIGH RISK = Dengue fever, Malaria, Japanese encephalitis
 - INTERMEDIATE RISK = Chikungunya, Rickettsioses,
 Typhus
- FHP Priorities
 - Use DEET on all exposed skin
 - Treat field uniforms with permethrice
 - Use bed nets in field conditions, treat with permethrin
 - Enforce anti-malarial medications as directed in Army Personnel Policy Guidance, Ch 7, 7-6

http://www.armyg1.army.mil/MilitaryPersonnel/ppg.asp 40

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PERSONAL PROTECTIVE MEASURES



Permethrin On Uniform



DEET On Exposed Skin



Properly Worn Uniform

MAXIMUM PROTECTION

DOD Insect Repellent System

YOU NEED TO KNOW...

Dry cleaning removes permethrin from the uniform

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INSECT REPELLENTS FOR SKIN AND CLOTHING

DEET lotion



NSN 6840-01-284-



• Apply a thin coat to EXPOSED skin

Permethrin

- Individual Dynamic Absorption Kit (IDA)
- Treatment lasts for



NSN 6840-01-345-0237

- Aerosol spray can
- Treatment lasts through 5-6 washes

NSN 6840-01-278-washes 1336

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One application lasts up to 12 D

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OTHER INDIVIDUAL COUNTERMEASURES

- Wash and inspect your body for insects/ticks and bites daily
- Use buddy system to check clothing routinely
- Launder uniform routinely to remove insects and eggs
- Order a permethrinimpregnated bed net for use while sleeping
 - Otherwise, treat a bed net before use by spraying the outside of the net with permethrin
 - Tuck edges under cot or sleeping bag
 - Don't let net touch McLrASSIFIE while you sleep D



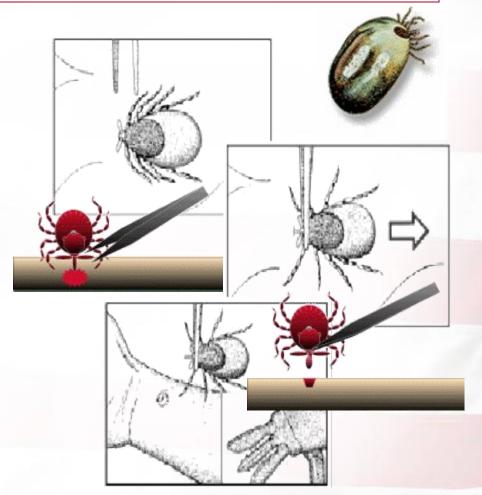
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TICK REMOVAL PROCEDURES

- Use fine-tipped tweezers to grasp mouthparts
- Grasp mouthparts against skin surface
- Pull back slowly and steadily with firm tension
- Avoid squeezing tick
- Wash wound and apply an antiseptic



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Infectious Diseases Cont.

- Animal-contact Diseases
 - HIGH RISK = Rabies
 - INTERMEDIATE RISK = Avian Influenza, Q Fever

FHP Priorities

- Avoid all animal contact
- No mascots
- Report all animal bites and scratches

What not to do!



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Infectious Diseases Cont.

- Sexually Transmitted Diseases
 - HIGH RISK = Hepatitis B
 - INTERMEDIATE RISK = Gonorrhea/chlamydia, HIV/AIDS
- FHP Priorities
 - Use Condom Sense!
 - Avoid sexual contact
 - Use latex condoms if sexually active



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Infectious Diseases Cont.

- Water-contact Diseases
 - HIGH RISK = leptospirosis
 - INTERMEDIATE RISK = schistosomiasis
- FHP Priorities
 - avoid unnecessary contact with lakes, rivers,
 streams, and other surface water
 There will not be a sign like

WARNING!

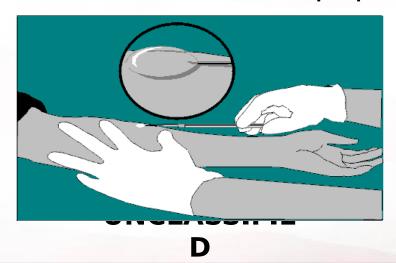
LEPTOSPIROSIS HEALTH HAZARD

FRESH WATER STREAMS AND MUD POSSIBLY POLLUTED WITH BACTERIA

> SWIM, BOAT, OR HIKE AT YOUR OWN RISK

Infectious Diseases Cont.

- Respiratory Diseases
 - INTERMEDIATE RISK = tuberculosis, melioidosis
- FHP Priorities
 - Tuberculin skin test before and after deployment
 - Avoid close contact with local population



Hazardous Animals & Plants

- Animals
 - Rabid animals snakes, centipedes, spiders
- Plants
- FHP Priorities
 - Do not handle animals
 - Shake out boots, clothing, & bedding
 - Do not touch, chew, eat, or burn unfamiliar plants



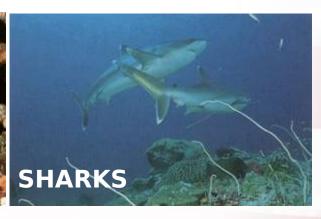




HAZARDOUS MARINE ANIMALS













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VENOMOUS SNAKES







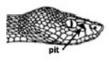








Long, hinged fangs that tuck into roof of mouth when not in use.



Vertically elliptical eye pupils; pit vipers with heat sensing organ between eye and nostril.



Broad triangular head very distinct from narrow neck





Short fangs fixed in erect position in front of mouth.



Round eye pupils.



Head small and not distinct from the body.

PIT VIPERS

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HAZARDOUS PLANTS

- Plant resins cause skin irritation
- Poisonous roots, stems, leaves, and fruit
- Weeds and stinging nettles
- Thorny shrubs and trees

Poisonous Plants



Mucuna pruritum



Systemic



Thorny Plant

Irritation

Punctures and Abrasions

COUNTERMEASURES

- Avoid touching unfamiliar plants
- Use clothing as protective barrier
- Rinse skin promptly after exposure

DNever eat any part of unfamilian.06

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OCCUPATIONAL HEALTH PRE-DEPLOYMENT

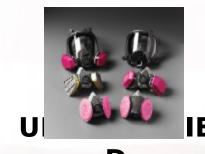
- Current industrial hygiene review of operations
- Engineering controls
- Supply of required personal protective equipment (PPE)
- Hazard communication (HAZCOM) training
- Personal protective equipment training
- Current medical surveillance



OCCUPATIONAL HEALTH DEPLOYMENT

- Occupational Health Hazards
- Use your applicable control strategies
 - Elimination or substitution
 - Engineering control
 - Work Practices and administrative controls
 - Personal Protective Equipment
- Follow the PPE program requirements







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FIELD FACILITIES CONTROL OF HAZARDOUS EXPOSURES

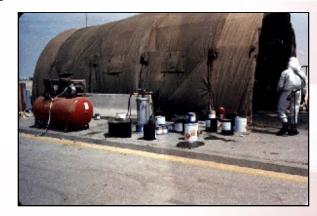
- Garrison facilities include engineering controls to control chemical exposures
- In the field, additional efforts are needed to provide the same level of control for these occupational exposures
- Install and use safety countermeasures



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OCCUPATIONAL HAZARDS

- Exhaust from engines and fuel space heaters
- Gases from weapons firing
- Solvents used to clean weapons
- Chemicals and metals from vehicles and equipment
- Greases and oil from vehicle maintenance repair
- Detergents used to clean equipment
- Fuels and refueling operations
- Weapon systems: radiation energy shock, vibration, noise





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DEPLETED URANIUM (DU)

 Depleted uranium (DU) is used in armor-piercing munitions and in enhanced tank armor protection

 DU can cause adverse health effects if it enters your body (inhaled, ingested, fragments).

COUNTERMEASURES



- Receive Depleted Uranium Awareness Training
- Assume a DU contamination zone of 50 meters around actively burning fires involving any armored combat vehicles
- As with all battlefield debris-do not touch or move the object
- Notify authorities of the location of any debris
- Exercise standard field hygiene, to include washing hands and face
- No additional protective measures are required for handling unfired DU munitions other than those required for all munitions

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CAVES

- Rabies from bat bites
- Tick-borne Relapsing Fever
- Histoplasmosis from bat guano
- Confined Space Issues
 - Poor air exchange/ventilation
 - Asphyxiant gasses and/or low oxygen level
 - Ordnance/munitions
 - Other hazardous chemicals and materials stored in the caves

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POST DEPLOYMENT

- Complete Post-Deployment Medical Health Assessment (DD FORM 2796)
- Receive post-deployment preventive medicine briefing
- Receive post-deployment screening, testing, and follow-up
- Continue anti-malaria medication as directed
- If sick after returning home, tell your physician that younges for loyed

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POST DEPLOYMENT

- Continue to seek counseling from Chaplain or medical personnel
- Homecoming Stress
 - Don't expect things to be exactly the same, especially if long deployment
 - Ease back into roles; don't rush it
 - Children may be withdrawn
 - Spouse may be moody or depressed
 - Financial and property issues may require immediate attention

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SUMMARY

- Review of Deployment Health Guide
- Preparation for Deployment
- Deployment
- Medical Threat
- Post Deployment



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CONCLUSION

Health threat awareness and implementation of associated countermeasures discussed in the briefing are critical to all military missions (including combat, support, and sustaining base military and civilian forces). Apply this information during all phases of military operations, including training, pre-deployment, deployment, and post-deployment.

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